

EXHIBIT B

DECLARATION OF WILLIAM K. BOHANNON

I, William K. Bohannon, declare under penalty of perjury as follows:

1. I am submitting this declaration in rebuttal to the claim constructions proposed by defendants and in rebuttal to the declaration submitted by defendants regarding U.S. Patent No. 6,738,121 (herein “the ‘121 patent”) patent.

2. I have personal knowledge of the facts stated in this declaration, and if called as a witness, I could competently testify to those facts.

3. I am a resident of the state of California, and I reside at 2060 Ridgcrest Place, Escondido, California.

4. In 1977, I received a Bachelor of Arts degree in mathematics. In addition, I have completed graduate work in mathematics, physics and computer science. I have studied several foreign languages, and I am fluent in Japanese.

5. During my professional career of over 25 years, I have worked in the commercial and industrial electronics field, with particular emphasis on display technology. Presently, I am the Chief Scientist for *Manx Research, Inc.* Among my various responsibilities, I manage and conduct detailed technical evaluations for all kinds of display products, such as liquid crystal display (LCD), cathode ray tube (CRT) and plasma display products. In addition, I oversee the collection of technical and market information relating to the Japanese and Korean LCD industry.

6. In addition to my work at *Manx Research*, I am currently the Vice President of *Planet ATE*, a company that I co-founded in 2001. *Planet ATE* develops and manufactures specialized integrated circuits (ICs) that are used in semiconductor manufacturing and testing equipment. My responsibilities primarily involve marketing,

sales and contract negotiation for customers in Japan, Korea, Taiwan, China, Singapore and Hong Kong.

7. Prior to my work at *Manx Research* and *Planet ATE*, I was the Chief Scientist, Display Products Division, for *Proxima, Inc.* As Chief Scientist, I tracked LCD and other display technology worldwide, in order to stay abreast and on top of the rapidly evolving technology; evaluated samples of then current and future production LCDs; and developed and tested new LCD products. I also directed *Proxima's* patent prosecution activities.

8. I have worked on several litigation matters, including a patent infringement suit; I have authored several publications; and, I am a named inventor on several patents. More detailed information about my background, experience and achievements can be found in my resume which is attached as *Exhibit 1*.

9. Given my background, experience, knowledge and education, I am regarded as an expert in the field of display technology, which includes flat panel display technologies such as LCD and plasma display technology. Consequently, I have been asked to review and analyze, and I have in fact reviewed and analyzed, the '121 patent, including the claims. I have personal knowledge and am familiar with the technology claimed in the '121 Patent. I have also reviewed both parties' proposed claim constructions.

10. The '121 Patent, entitled "Tape Carrier Package with Dummy Bending Part and Liquid Crystal Display Employing the Same," relates to the design of a tape carrier package (TCP) for improving how driver integrated circuits (D-ICs) are mounted on the liquid crystal panel of a liquid crystal display (LCD).

11. Generally, TCP is an apparatus used to connect the D-ICs to the liquid crystal panel and the printed circuit board (PCB). The PCB is located on the rear side of an LCD panel by bending the TCP, mounted with a D-IC and connected between the back plane (lower glass substrate) and the PCB. The TCP is equipped with leads that connect the D-ICs to the PCB, to receive the signals from the PCB, and to the contact pads of the rows and columns in the active matrix, to deliver the output signals.

12. During the manufacture of LCD panels, it is important to be able to form and connect all components without damage. One problem that often arises during the connection of the D-ICs is warping of the glass substrate caused by the high heat and pressure in the manufacturing process. Specifically, the thermal expansion forces and the thermal contraction forces generated at the time of thermal-pressing the TCP to the liquid crystal panel result in warping of the back plane. Such warping of the glass substrate is undesirable because it causes a brightness variation on the screen.

13. The '121 Patent discloses a tape carrier package that is mounted on the liquid crystal panel in such a way that does not cause a brightness variation in the LCD. The TCP of the '121 Patent has at least one bending part, which is a bendable part of the TCP where base film has been removed to enable the tape carrier package to bend. The TCP of the '121 Patent also has at least one dummy bending part, which is a part of the TCP where base film has been removed, and has a function other than bending. The dummy bending part functions, *inter alia*, to distribute stress caused by thermal expansion applied to the liquid crystal panel when the tape carrier package undergoes thermal pressing. In doing so, it is possible to prevent stress-induced deformation of the back

plane of the liquid crystal panel, thereby preventing the occurrence of brightness differences on the LCD screen.

14. In 1999-2000, the term “tape carrier package” would have had an ordinary meaning to one of ordinary skill in the art. To the extent a construction is needed, the term “tape carrier package” should be construed to mean “an apparatus to connect an integrated circuit chip to the liquid crystal panel and the printed circuit board”. This construction is consistent with the patent’s specification as well as the ordinary meaning of “tape carrier package” as it is understood in the art. The meaning of “tape carrier package” would not be “an assembly used to connect a driving integrated circuit (D-IC) to the liquid crystal display (LCD) and the printed circuit board (PCB) having a base film, adhesive and metal layer,” as Defendants contend. This construction is overly narrow because it introduces limitations of the “driving integrated circuit” and the three layered structure that are not necessary. One of ordinary skill in the art would not, as Defendants contend, understand a TCP to be limited to only connecting driving integrated circuits, nor would a person of ordinary skill in the art have understood the TCP to be limited to a single specific disclosed embodiment having a base film, adhesive layer, and a metal layer. The claims of the ‘121 Patent themselves, use the open-ended “comprising” language to indicate that the TCP is not as limited as Defendants suggest.

15. In 1999-2000, one of ordinary skill in the art would have understood a “bending part” to be “a bendable part of the tape carrier package where the base film is removed”. This construction is consistent with both the ordinary meaning of the words “bending part”. For example, a review of the specification indicates that the bending part is bendable and can exist at “a bent position.” This is consistent with the ordinary

meaning of the word “bending”. The term “bending part” does not, as Defendants contend, mean an “area of the tape carrier package where a portion of base film is removed where the tape carrier package is to be folded.” This construction attempts to narrow “bending” to mean the same as “folding”, but there is no reason or justification for doing so. Furthermore, the ordinary meaning of “bending” and “folding” are different. Contrary to Defendants’ contention, a “bent” position is not necessarily a “folded” position, and based on my review there is no reason or justification arising out of the specification for equating bending with folding.

16. After a review of the intrinsic evidence, one of ordinary skill in the art would understand a “dummy bending part” to be “a bendable part of the tape carrier package where the base film is removed, which has a function other than bending”. This construction is based on the use of the phrase “dummy bending part” in the specification and claims. “Bending part” suggests that the part is bendable, and the term “dummy” suggests that while the part is able to bend, it has a function other than bending. The phrase “dummy bending part” does not, as Defendants contend, mean an “area on TCP where a portion of the base film is removed between either the input or output pad part and the driving integrated circuit where the tape carrier package is not folded.” Defendants’ construction improperly equates the terms “bending” and “folding,” despite the fact that nothing in the specification suggest drawing such an equivalency. In addition, Defendants’ construction limits the term to specific embodiments regarding the relative positions of the “dummy bending part” and the input and output pad parts. In this regard, Defendants’ construction is improper because the claims make clear that a variety of positions for the “dummy bending part” are contemplated. Furthermore, Defendants’

construction ignores the context of the invention, which discloses “a dummy bending part that is capable of reducing the brightness difference of the screen.”

17. In 1999-2000, one of ordinary skill in the art would not, as Defendants contend, understand an “output pad part” to be an “area of the tape carrier package that connects to the pads formed on the edge of the lower glass substrate of the LCD.” By limiting “output pad part” to a particular type of connection at a particular location on the lower glass substrate, Defendants’ construction improperly limits an output pad part to particular embodiments disclosed in the specification. But the plain meaning of the phrase “output pad part” does not include any such limitations. Furthermore, the specification does not narrow the meaning of the phrase beyond what is understood in the art. The phrase “output pad part” is used broadly in the specification and claims to mean simply “an interface between the integrated circuit chip and the liquid crystal panel”. This construction is consistent not only with the specification but also with the ordinary, meaning of “output pad part.”

18. In 1999-2000, one of ordinary skill in the art would not, as Defendants contend, understand an “input pad part” to be an “area of the tape carrier package that is connected to the output signal wiring of a printed circuit board.” Defendants’ construction improperly limits an input pad part to specific embodiments disclosed in the specification. For example, their construction requires the input pad part to be connected to one particular type of wiring that carries a particular kind of signal. But there is no basis in the specification to do so, nor does the ordinary meaning of the phrase “input pad part” suggest it. LPL’s proposed construction of “an interface between the integrated circuit

chip and the printed circuit board” is consistent with the specification and the ordinary meaning of “input pad part.”

19. In 1999-2000, one of ordinary skill in the art would not, as Defendants contend, understand “bent position” to be a “location on the tape carrier package where the tape carrier package is folded.” As with their construction of “bending part,” Defendants have construed two *different* terms, “bent” and “folded,” identically. Equating these two terms is not suggested in the specification. In addition equating these two terms without any clear reason is confusing because “bent” and “folded” clearly have different plain language meanings. The term “bent position” refers to the position of the “bending part” on the tape carrier package, and LPL’s proposed construction of “bent position” as a “position that is not flat” is consistent with the specification and the ordinary meaning of “bent position.”

20. In 1999-2000, one of ordinary skill in the art would not, as Defendants contend, understand “not folded” to be “a substantially flat area of the TCP.” The term “not folded” relates to the position of the dummy bending part on the tape carrier package, *i.e.*, “where the tape carrier package is *not folded*.” Defendants argue that “not folded” means the same as not at a “bent position,” but “bent” and “folded” are different and have different plain language meanings. It is clear that something can be “not folded” without having to be “substantially flat”. LPL’s proposed construction of “not making a fold” is consistent with the specification and the ordinary meaning of “not folded.”

21. In 1999-2000, one of ordinary skill in the art would have understood the phrase “thereby reducing a thermal expansion force and a thermal contraction force of the base film parallel to a longitudinal direction of the integrated circuit chip” to mean

“reducing a thermal expansion force and a thermal contraction force parallel to the longitudinal direction of the integrated circuit chip that result from thermal pressing the tape carrier package to the liquid crystal display panel.” This construction clarifies that the thermal pressing causes thermal expansion and contraction forces.

22. In 1999-2000, one of ordinary skill in the art would not, as Defendants contend, understand “on the pad part” to mean “aligned directly on top of the pad part.” Defendants introduce new and narrowing terms in their construction, such as an “aligned” and “on top.” But the ordinary meaning of the term “on the pad part” does not define any alignment, nor does it describe any positional relationship such as “on top”. The terms introduced in Defendant’s construction are vague and ambiguous. The term “on the pad part” refers to the position of the “dummy bending part” in relation to the “pad part.” LPL’s proposed construction of “at or along, or in proximity to, the pad part” is consistent with the broad use of the term in the specification as well as the ordinary meaning of “on the pad part.”

23. In 1999-2000, one of ordinary skill in the art would understand the phrase “reducing a thermal expansion force and a thermal contraction force” to be “reducing the thermal expansion and contraction forces that result from thermal pressing the tape carrier package to the liquid crystal panel.” The specification discusses that thermal pressing the tape carrier package to the liquid crystal display panel creates thermal expansion and contraction forces. The specification discusses that the invention reduces these forces. Defendants’ proposed construction of “a reduction of a thermal expansion force and the thermal contraction force generated when thermal pressing the output pad part of the tape carrier package onto the liquid crystal panel” is unnecessarily narrow because it requires

that the thermal expansion and contraction forces are created only when the output pad part is thermal pressed. However, thermal expansion and contraction forces would be created when any component is thermal pressed, not simply the output pad part.

Accordingly, the construction “reducing the thermal expansion and contraction forces that result from thermal pressing the tape carrier package to the liquid crystal panel” is clearer and more consistent with the specification and with the how one of ordinary skill in the art would understand the phrase.

24. In 1999-2000, one of ordinary skill in the art would understand the phrase “distributing a stress applied to the liquid crystal panel according to a thermal expansion of the pad part” to mean “distributing the stress applied to the liquid crystal panel that results from the thermal expansion of the pad part during thermal pressing.” It is clear from the specification that the thermal pressing causes thermal expansion that stresses the liquid crystal display panel, and this construction clarifies this. However, Defendants’ proposed construction of “distributing a stress applied to the liquid crystal panel that results from the thermal pressing of the output pad part of the tape carrier package on the liquid crystal panel” narrows “pad part” to be “output pad part”. This is overly narrow because the term “output pad part” does not appear in all of the claims. The claims are written in a way that includes but is not limited to the output pad part, so it is improper to narrow “pad part” to mean only “output pad part”.

25. In 1999-2000, one of ordinary skill in the art would understand that the phrase “pad part extending from the integrated circuit chip” has an ordinary meaning of “an interface electrically connected to the integrated circuit chip.” The term “pad part” is well-known by people of ordinary skill in the art to be an interface. Based on my review

of the specification, "the pad part extending from the integrated circuit chip" is best understood to mean that the interface is electrically connected to the integrated circuit chip. However, Defendants' construction of "the pads located at the ends of the TCP which are electrically connected to the integrated circuit chip" is too narrow. This construction adds the requirement that the pads be located at the ends of the TCP, but nothing in the specification or claims requires the pads to be at the ends of the TCP. Furthermore, "at the ends" is vague and imprecise, so Defendants construction adds ambiguity to the claim language rather than clarifying the language.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed on 14 March, 2006 at Tokyo, Japan.

William K Bohannon
William K. Bohannon

DC:50398416.1

EXHIBIT 1



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Suite 1010
San Jose, CA 95128-2533
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408.261.0320 facsimile
www.teklicon.com
www.fticonsulting.com

WILLIAM K. BOHANNON

SUMMARY

Worked in the commercial-industrial electronics and professional audio-visual industry for the last thirteen years. Prior to work in commercial industry, worked in the aerospace industry for another approximately 10 years. Responsibilities included a number of highly sophisticated, government classified sensor and imaging projects. Prior to government and aerospace work, was involved with analytical, scientific research regarding spectroscopy for a number of years.

Has been involved with electronic systems, detectors, measurements, sensors, projectors, displays and imaging apparatus for close to twenty-five years. Has been involved with all phases of the development of various kinds of electronic systems, including conception, invention, development, marketing and sales. Prepared specifications, negotiated with various customers over system or component requirements and specifications, and prepared or negotiated over tests and measurements of these systems or their separate components to insure that the specifications or requirements have been or will be met. Also, prepared and negotiated development contracts and subcontracts for such systems or for their electronic components.

PROFESSIONAL EXPERIENCE

2001 to Present Planet ATE
Co-founder and Vice President

Planet ATE develops and manufactures specialized integrated circuits (IC) used in industrial semiconductor manufacturing and test equipment. Planet ATE IC functions include driver, comparator, timing adjust and parametric measurement. Targeted equipment includes IC test, wafer test, package test, test and burn-in equipment.

Responsible for marketing, sales and contract negotiation with customers in Japan, Korea, Taiwan, China, Singapore and Hong Kong of specialized ICs used in industrial test equipment. Duties include demonstration and verification of IC and system performance, verification of meeting customer's requirements at component and system level.

Customers include all the major and minor producers of IC and wafer test equipment such as Agilent, Advantest, Yokogawa and Credence as well as in-house IC test equipment for companies such as Samsung, Sharp and Rohm.

William K. Bohannon
Resume

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1994 to Present Manx Research
Chief Scientist and Principal.

Manage and perform technology, business assessment, development and international trade contracts for corporate clients and publications. Magazine clients are Pacific Media Associates, Lakewood Publications, Electronic Design and Journal of Information Display. U.S. corporate clients are Texas Instruments, 3M, IBM, Kodak, Rockwell, Edge Semiconductor, Epson America, In Focus Systems and Proxima. International clients include JVC, Panasonic, Daewoo, Eiki International, Kodak Germany and many others.

Current Manx Research Projects

Display Products -- Manage and conduct detailed technical product evaluations for all kinds of display products -- LCD direct view, projection products of all types, CRT products and plasma products. The various products are evaluated at Manx Research's facilities and in the manufacturer's facilities. Maintain a database of product performance and report upon the results and comparisons in various publications both private and public.

LCD -- Manage and conduct several projects to collect information (technical and market) on the Japanese and Korean LCD industry. This involves interviewing (in Japanese) all of the major LCD manufacturers several times a year to gather insights on technology and pricing trends. This information is compiled and disseminated in private reports.

Semiconductor -- Managed the Asian (Japan, Korea and Taiwan) market development for Edge Semiconductor (a division of Semtech). Edge makes specialized ICs used in test equipment. Work involves several trips per year to Asia -- meeting with Asian customers (the major IC and test equipment manufacturers) and negotiating custom IC development contracts. Also, gather IC production equipment related technical and market information. Note: these activities are now part of Planet ATE.

Miscellaneous -- Manage and conduct various projects in international trade and marketing as well as help with Japanese-U.S. trade negotiations for companies. Negotiate Japanese investments in U.S. technology as well as evaluate technology for various products or concepts. Also act as an expert in high technology patent and legal matters in the U.S. and Japan for various firms.

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Resume

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Past Manx Research Projects

Completed business modeling and analysis studies for display component manufacturing. This study involved several trips to Japan to meet with all of the major suppliers of display component processing and manufacturing equipment and to gather material and equipment information, pricing information and equipment installation and maintenance data. Developed a detailed 5-year business model of the proposed operation from sales, distribution and marketing to manufacturing including staffing models and process flow models.

Also completed contracts for medical imaging component development and procurement, LCD materials and process equipment development and procurement, projection equipment development and procurement, LCD controller market analysis, LCD component market analysis and laser diode marketing and applications.

1989 to 1994

Proxima
Chief Scientist, Display Products

Tracked liquid crystal display (LCD) and other display technology worldwide with special emphasis on Japan. Defined the company's technology directions. Obtained and evaluated samples of all current and future production LCDs. Developed extensive Japanese business and academic contacts for LCD technology. Worked closely with several Japanese companies and laboratories to develop new products and to test existing LCD products. Established the company's Japanese distribution system together with a Japanese trading company. Defined the company's intellectual property directions and strategies and have several patents issued and applied for in LCD technology. Responsible for directing the company's patent, trademark and litigation activities.

1983 to 1989

TRW
Program Manager

Managed hardware (including displays) and software development of advanced network of computer controlled signal processing systems and artificial intelligence systems for signal processing and mission planning using both rule based and neural processing techniques. Advanced business manager for artificial intelligence business areas. Also responsible for hardware and software interfaces and computer architectures for complex avionics systems.

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1980 to 1983 Hughes Aircraft Co.
Sub-Program Manager

Managed computer-controlled laser pointing and tracking system used in airborne applications. Responsible for all development and flight testing of controls, display, hardware, software and system interfaces within a very complex avionics system. Also performed system engineering for LCD projection systems and radar processing systems.

1979 to 1980 Kappa Systems

Responsible for data processing and analysis of Ballistic Missile Early Warning System (BMEWS) evaluation.

1976 to 1979 Science Applications

Responsible for all phases of data processing used in qualitative and quantitative analysis of materials with neutron activation and gamma ray spectroscopy.

EDUCATION

BA Mathematics, Graduate work in Mathematics, Physics and Computer Science, Language Studies in French, Arabic, Spanish and Japanese.

LITIGATION RELATED EXPERIENCE

Disclosed as a testifying expert in the following closed matters.

Case:	Epson v. Plus
Matter:	Patent dispute
Responsibilities:	Analyzed electronics used in computer displays for plaintiff. Wrote reports.
Date closed:	2003
Attorney/Firm:	Oloff and Berridge

Case:	FAS Technologies v. Dainippon Screen Mfg.
Matter:	Theft of trade secrets
Responsibilities:	Analyzed LCD manufacturing technology for defendant.
Date closed:	2002
Attorney/Firm:	Farella, Braun & Martel LLP

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Case:	Teramars of Miami v. Forefront International of Taiwan
Matter:	Contract dispute
Responsibilities:	Analyzed computer monitor technology and marketplace for defendant. Videotaped deposition.
Date closed:	2001
Attorney/Firm:	Law Offices of Michael E. Greene
Case:	IMT, et al. v. Haynes & Boone
Matter:	Patent malpractice
Responsibilities:	Analyzed computer monitor technology and marketplace for defendant. Wrote reports.
Date closed:	2000-Settled
Attorney/Firm:	Baker and Botts
Case:	Lockheed v. Itochu and Dicomed
Matter:	Contract dispute
Responsibilities:	Analyzed high resolution imagers used in digital cameras on behalf of defendant (Itochu) regarding digital imaging technology. Wrote reports.
Date closed:	2000-Settled
Attorney/Firm:	Pillsbury Madison and Sutro LLP
Case:	Undisclosed v. Epson
Matter:	Contract dispute
Responsibilities:	Analyzed LCD modules and laptop displays. Testified before a three-judge arbitration panel on behalf of defendant in a matter regarding LCD modules used in laptop computers
Date closed:	1998
Attorney/Firm:	Loeb & Loeb LLP

PUBLICATIONS

- 1) Has written a monthly column for "*Presentations*" magazine on image quality and performance of professional audio-visual equipment for approximately seven years. Also, has written semi-month features and columns for *eMedia* magazine for approximately the last three years.
- 2) Has written occasional feature articles about audio-visual industry technical trends for various magazines such as "*Presentations Magazine*", "*eMedia*", "*Information Display*" and "*Electronic Design*" for approximately the last ten years.

William K. Bohannon
Resume**Page 6.**

- 3) Has written occasional feature articles for "Pacific Media Associates" about technical trends in the audio-visual industry and about the image quality performance of selected audio-visual products for approximately the last ten years.
- 4) Occasionally some of the above articles have been excerpted or used in other publications such as United Airlines in flight magazine, "Horizons."
- 5) Opinions on various products are occasionally quoted by various manufacturers in their new product announcements.
- 6) Has written private, confidential reports on electronic display products, components and related technical developments for a variety of customers for the last ten years. Customer list includes: IBM, Apple, Texas Instruments, 3M, Kodak, Xerox, OCLI, In Focus, Proxima, Electrohome, Epson, Panasonic, Mitsubishi, Eiki, NEC, JVC, Sarif, Silicon Light, SVison, COLOR, Barco, Hughes-Elcan and Quantum Image and others.

PATENTS

<u>Patent Number</u>	<u>Year Issued</u>	<u>Title</u>
5,512,967	1996	Projector
5,302,946	1994	Stacked Display Panel Construction and Method of Making Same
5,299,039	1994	Stacked Display Panel Construction and Method of Aligning Pixel Elements Thereof
5,298,892	1994	Stacked Display Panel Construction and Method of Making Same
5,177,629	1993	Liquid Crystal Display with an Optical Fluid Layer
5,137,484	1992	Method of making a liquid crystal display construction
5,089,810	1992	Stacked Display Panel Construction and Method of Making Same

Various foreign patents in display technology.

January 12, 2004